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AUTHOR Fraser, Robert T.; And Others
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ABSTRACT

A specialized vocational program served 108 epileptic individuals who participated in the program during the first 18 months of its operation. The following are some of the aspects of the program: utilization of the neuropsychological data in rehabilitation planning, brief work adjustment, a job station program, training in job seeking skills, social skills training, on-the-job training, a job finding club, placement services, and followup programs. Among conclusions are that seizures do not appear to be the major barrier to employment maintenance, rather it is "epilepsy associated" problems (psychosocial difficulties and performance problems) which cause loss of employment; and the need to establish satellite vocational units to more effectively reach and work with epileptics. (PHR)

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EPILEPSY CENTER

Specialized Vocational Services for the Individual with Epilepsy*

Robert T. Fraser, Ph.D.
Kathi Erikson, M.S.
Joseph G. Thompson, M.S.

Department of Neurological Surgery
University of Washington School of Medicine
Seattle, Washington 98195

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Specialized Vocational Services for the Individual with Epilepsy

The job search frustrations encountered by many individuals with epilepsy are well documented in the literature. The National Epilepsy League (Perlman, 1977) recently completed a national survey related to the needs of those with epilepsy. A total of 646 individuals were mailed surveys (every fifteenth name) via selection from the roster of the League's Pharmacy service (n=14,600), with the final response rate being 56% (n=363). Vocational needs were the most salient identified through this survey. The following is a synopsis of these findings:

- 50% indicated that epilepsy had created problems in getting a job.
- in ranking problems as the most serious facing those with epilepsy, "discrimination in jobs" was first with a 32% response rate.
- in relation to direct services needed, the service for which there was the greatest need was job counseling with a 27% rate of response (decidedly above the need for even better medical care).
- an additional job-related problem area was access to transportation, 54% had no driver's license.

A review of the statistical data compiled by the Epilepsy Foundation of America (1975), reveals an unemployment rate for persons with epilepsy in the labor force that is consistently between 20-25%. Other related findings include those of Wright (1975, p. 5), who in reviewing background information for his book Epilepsy Rehabilitation, determined that the state-federal program rehabilitated a smaller percentage of clients with epilepsy in 1973 than it did in 1962. Section 4005.03 of the Rehabilitation Services Manual Criteria for Innovation and Expansion Grants continues to identify epilepsy as a disability group which is underserved.

Unit Structure

The unit is composed of one Ph.D. in rehabilitation counseling psychology, two half-time rehabilitation counselors, and a rehabilitation trainee (who functions as a placement coordinator). In addition, the establishment of a state vocational rehabilitation counselor (DVR) within the unit on a part-time (one day per week) basis has been of significant benefit. This counselor has enabled a greater degree of service coordination with the DVR agency and also provides services to individuals who normally would be ineligible for Center vocational services (due to lack of medical involvement with the Center).

Service Components

The procedures for provision of services have been continually modified during the first 18 months of unit activity. Figure 1 presents an overview of unit programming.

Insert Figure 1 about here

Referrals for vocational services stem from other disciplines, chiefly social work staff as a result of the psychosocial intake interview. Additional referrals are made through the in-house DVR counselor or other state rehabilitation counselors in the WAMI region (Washington, Alaska, Montana, and Idaho) for purposes of evaluation, job seeking skills training, placement, etc. Clients who are not being medically treated by the Center are referred on a fee for services basis by DVR. Some of the more unique aspects of the program include:

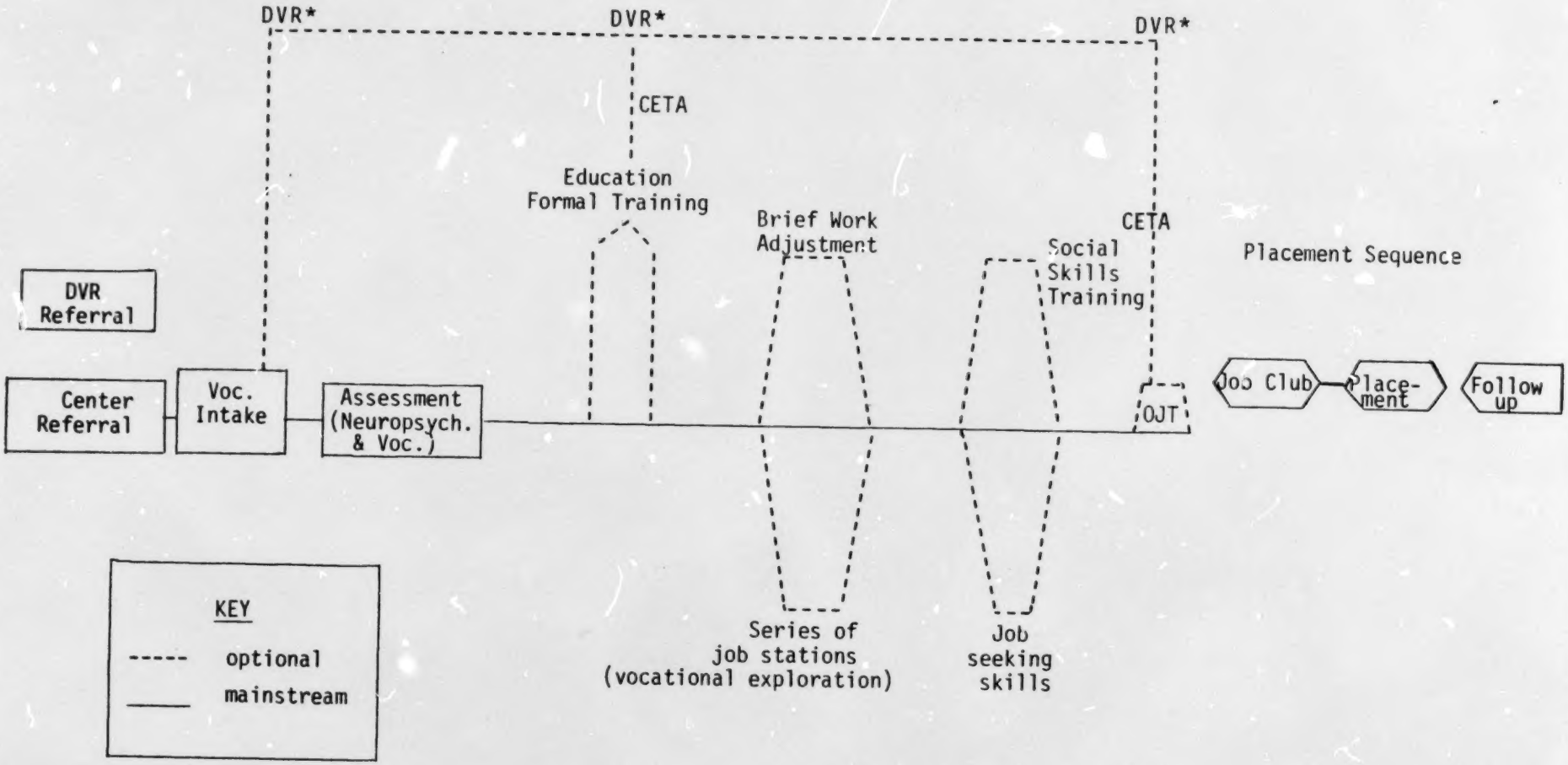

Figure 1: An Overview of Vocational Unit Procedures (1978)

* Client can be maintained on a DVR caseload while vocational assessment and programming is performed by Epilepsy Center Vocational Unit. Funding is sought from the sponsoring agency as appropriate.

a.) Utilization of the Neuropsychological Data in Rehabilitation Planning. The neuropsychological report aids the rehabilitationist by not only providing an assessment of emotional and intellectual functioning, but also identifying specific patterns of neurological strength and deficiency areas which can be crucial information to successful placement. Neuropsychological data is complemented by vocational interest measures and appropriate aptitude or achievement assessment.

b.) Brief Work Adjustment - In order to assess the impact of the disability upon performance or to ensure that a client has appropriate work-related behaviors after, in some cases, years of vocational inactivity; a referral is made to a local sheltered work setting which compensates on a productivity basis (100% productivity = $4.50 per hour) or a local factory which hires the disabled will accept individuals for a period of adjustment. This work adjustment period usually lasts from several days to several weeks.

c.) Job Station Program - Job stations are various work experience slots (laundry room worker, social work intake worker, legal librarian, etc.) that have been developed within the Harborview Medical complex, at nearby Seattle University, or within Federal Civil Service. The emphases here are client work exploration, development of appropriate work behaviors, a work site evaluation of performance, and a determination of the effect of disability-related variables on job functioning.

d.) Job Seeking Skills - The job seeking skills program is an 8 hour intensive session in job search skills and includes identification of job leads, application completion, resume writing, telephone "cold calling" for jobs, and the videotaping of employment interviews. A focus of the training is enabling an individual with epilepsy to understand when and if it is approp-

riate to discuss the disability with an employer. Another key focus can be coaching the client in order that he/she might be able to present a clear and succinct description of the seizure disorder and possible effects upon work performance. If more intensive job seeking skills training is required, a referral is made to a project in the community that has a three week program.

e.) Social Skills Training - Social skills training in areas such as memory, problem solving, or conversational skills, is a service provided by a clinical psychologist and social work staff (Smith, 1978). This service very effectively complements vocational unit efforts to facilitate client job readiness. The vocational and social skills units have collaborated in the past and currently are planning a career enrichment/job maintenance class for those who secure a job--with many clients, counselor energies become quickly drained, once a job has been secured, in sundry job maintenance efforts.

f.) On-the-job Training (OJT) - This type of a program is an ideal approach to developing both a training vehicle and a job placement simultaneously. Following assessment of interest and abilities, it can be the case that an individual's desired training program does not exist in the Seattle area (or even in the Northwest)--e.g., musical instrument repair, upholstery, or survey technician. CETA and DVR funding is "tapped" to subsidize employer's training costs over a period that is usually three to six months. There is a "good faith" agreement on the part of the employer to retain the employee on the job after the period of training has terminated. The financial

subsidization of the OJT position can be very assistive as a hiring inducement to the employer. Some clients are only interested in OJT training.

g.) Job Finding Club - This is a modification of the vocational group format developed by Azrin, Flores, and Kaplan (1977). Job club consists of a group situation in which participants are involved in a two phase process. The first section of the meeting consists of a job lead "brainstorming" session for each client and discussion/problem solving of job search issues (transportation, concerns about medical coverage, etc.). Subsequent to this phase, a community employer with group relevant job opportunities visits the group to explain hiring routes into his/her company. This aspect of the job finding club is very reinforcing to job club participation as is the termination of the session in which job leads available to the unit are shared with group members.

h.) Placement - The placement efforts of the unit are a combination of client coached (but independent) job search activities and direct placement efforts on the part of the counselor. Approximately 60% of our placements are a result of direct placement intervention. Assistive in direct placement efforts are a close working relationship with the Federal Civil Service Selective Certification program (15 placements since last November), a contract with Employment Securities for the securing of daily job orders, and daily access to the listings of new CETA positions.

i.) Follow-up - Follow-up in many rehabilitation settings is a myth. This simply can't be the situation in the field of epilepsy rehabilitation. The

reactions of co-workers and superiors to seizures on the job, the various side effects of anticonvulsant medication and their impact upon job performance, anticonvulsant program non-compliance, psychosocial problems, performance difficulties due to neurological deficits, and lack of understanding of employer expectations are all reasons involved in the high percentage of clients (53%) who are intensively followed and counseled on a weekly or bi-weekly basis for several months. A recent addition to this phase of rehabilitation is a peer counseling program with successful job holders discussing problem areas with the newly hired during business lunches.

Innovative Aspects of the Program

a.) High Frequency of Participation in Vocational Activities - A review of client intake information indicates a lack of prior contact or success with rehabilitation agencies. Our message is that your involvement with us "will be different" and this is reinforced through frequent participation in various components of the unit's program. There is no waiting for some "ideal" state of "seizure control" before the client is actively involved with the unit.

b.) The Job Club - This vocational group activity is really the cornerstone of the placement program. Job Club enables the unit to organize job search efforts for the week, assess client interpersonal functioning, and informal meetings with employers tend to lessen client anxiety surrounding future interactions with the business world. There is both explicit and implicit confrontation in relation to active involvement in job pursuit efforts (e.g., on the implicit side, it is difficult to blame lack of employment on the dis-

I. Seizure Information

a) type

b) frequency

c) complete description of seizure activity

d) existence, dependability, and amount of time - warning or aura

e) situational or temporal pattern

f) precipitants

g) recovery time

h) consequences

i) history of seizure-related injuries

j) impact of seizures on job search activity

II. Anticonvulsant History

a) recency and sophistication of medical evaluation

b) stability of program

c) assessment of compliance

d) side effects

Figure 2. Important seizure-related information for vocational planning

ability when individuals with more severe forms of seizure activity were hired out of the group the previous week). A very concrete positive outcome to employer visits to the group is the substantial proportion of these employers who hire job club members and, in effect, become ongoing friends of the unit.

c.) The Utilization of Seizure-Related Information in Vocational Planning

In rehabilitation planning with this populace, comprehensive seizure-related information is carefully gathered. How will this seizure disorder specifically affect functioning on the job? (Figure 2) We must be concerned with type and frequency of seizures, a clear description of the seizure activity, itself; the existence of a dependable warning on the day of the seizure (physical nausea, etc.) or the presence and amount of time involved in a seizure aura (initial portion of a seizure in which the client is conscious and capable of taking safety precautions), and any evidence of a pattern to the seizures. Information regarding possible precipitants of seizures (fatigue, flickering lights, alcohol intake, anxiety, etc.), seizure recover time, and the various consequences of having a seizure must be carefully noted (e.g., embarrassment or any unsteady gait). Other factors, such as the direction an individual falls during a generalized "grand mal" seizure or whether this person has ever been injured during a seizure, are considered when recommending a job station or placement. Anticonvulsant history is also important including recency and "sophistication" of last medical evaluation or the clinical assessment of compliance to the anticonvulsant regimen.

The more seizure-related information counselors have in regard to their clients, the better prepared they are to engage an employer for placement purposes. For example, if a client has both "grand mal" and "petit mal" seizures but it can be determined that the grand mal seizures occur in the

early morning hours (4-5 a.m.) and the petit mal (absence seizures) are barely discernable (lasting only seconds with rapid recovery) during the day, client "employability" is significantly improved. The existence of a dependable aura or warning sensations are also important, as they provide time for an individual to withdraw from potentially unsafe work situations.

Review of Program Intake and Follow-up Data

During the first 18 months of services approximately 160 clients had contact with the unit. Of this number, 52 were brief consults--already working, referred to state vocational rehabilitation because they were not Center patients, etc. The data reviewed here is in reference to 108 clients who were subject to intake into the program.

Intake Data

Tables I through IV review client intake data. In Table I, it should be noted that this is not an extremely young populace ($x = 28.9$ years) and that the general educational level is approximately high school ($x = 12.8$). The average time spent unemployed was 10.3 months within the last 24. Almost all of the clients (94.4%) were still having seizures on a yearly basis and 67.5% of this group were having seizures on a monthly basis. As a further index of impairment, 82.4% lacked a driver's license which can be a definite barrier to job access.

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Insert Table I here

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In Table II, client earnings at intake are represented. It is of interest that 51% of these clients were supporting themselves on some form of federal or state subsidy. There was a small group (11.1%) who were employed on a part-time basis

or in a sheltered work setting.

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Insert Table II here

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Table III is supportive of the fact that a substantial portion of those needing vocational assistance are not being reached by the state vocational rehabilitation agency. Only 49.1% of the clients had prior contact with the state agency. Of this group that had prior contact with state rehabilitation, only 6 clients (11.3%) claimed a job placement outcome while 24.5% stated that nothing happened as a result of their agency contact. A substantial portion were referred for training or college (32.1%) and a more recent development has been referral of clients to the Epilepsy Center.

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Insert Table III here

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In Table IV, the reader finds a summary of specific work-relevant seizure data. Although the individual groups are small, it is of interest to note that those with partial seizures, secondarily generalized appeared to have the most dependable warning or aura (66.6%) as contrasted to only 10.5% of those with absence seizures. Clients also seem to feel that seizures present a barrier to employment with 44.4% of the intake group stating that seizures prevent their looking for work and 39.8% stating that they were previously refused work due to seizures. For this populace, disclosure of the disability would definitely be an issue as more than two-thirds of the group (67.6%) stated that they had experienced seizures while working on previous jobs.

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Insert Table IV here

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Follow-up Data

Tables V through VIII review follow-up status at the conclusion of the vocational units' initial 18 months of service. An additional effort was made to contact those clients who had secured employment (n = 50) and negative program exits or "drop-outs" (n = 21) by phone to procure specific follow-up information, to include client ratings of the different components of vocational services (on a five-point Likert scale: 1 = no value through 5 = extremely valuable).

Table V reviews general program data for the first 18 months of services and then presents basic information on the employed group. Follow-up data indicates that 50 clients secured employment (46.3% of those subjects to intake)--although several clients were placed twice for a total of 57 placements. In addition to negative exits (program "drop-outs", which were approximately 20% of those subjects to intake, 20.4% of the clients were still with the program ("in process") and 9.3% had entered training or college programs.

Information on the employed group presented in Table V indicates that 83% (34/41) of those contacted were still employed. Mean education (12.8 months) of the employed group at intake was identical to that of the general intake populace. The employed group had spent slightly more time unemployed in the 24 months prior to intake ($\bar{x}$ = 11.7 months vs. $\bar{x}$ = 10.3 months) than had the intake group. Involvement with an additional disability for the placed group is also represented in Table V.

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Insert Table V here

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In Table VI, follow-up data is reviewed on those clients whose cases

were closed in an employed status. This data reviews self report information on 41 of the 50 clients who secured employment. These 41 clients are broken into three groups:

(a) employed, remaining on same job (n = 21)

(b) lost original job, but still working (n = 13)

(c) lost job, not working (n = 7)

It also appears that the more stable an employment status, the greater the probability for substantially higher wages. It should also be noted that the salary levels, in general, are high as contrasted to the limited follow-up data that exists in the field (Freeman and Gayle, 1978, p. 237). This is, to some degree, a function of a substantial number of placements within U.S. Civil Service (n = 16)--e.g., a clerical GS-3 position pays $7,930.00 per year. The median was selected as the salary statistic for the "lost job, not working" group because one individual with an extremely high salary would have skewed the mean in a non-representative fashion. As a final note, seizure status does not seem to be related to employment outcome.

From a review of the salary levels in Table VI, it also becomes readily apparent that few of the employed could have been closed in a sheltered work or homemaker status which is done by state vocational rehabilitation. In our closure statistics, none of the employed were closed in either of these categories.

Clients were also asked to rate the various vocational service components on a 5 point scale (viz., 1 = no value through 5 = exceptional value). Table VI indicates that for the employed groups; job leads, follow-up service, and counseling seemed to be of most value (rating means $\geq$ 3.5). It

is of interest that group activities such as job club or job seeking skills training approximated only average ratings ($\bar{x}$ = 3.0).

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Insert Table VI here

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Reasons for job loss are enumerated in Table VII. This is a combination of the reasons for a job loss by members of two groups: those who lost a job, but are currently working (n = 13) and those who lost a job, but did not return to work (n = 7). Causation for job loss was established through a synthesis of information gathered via client self-report at follow-up and counselor investigation of the termination. It is of interest that emotional/attitudinal difficulties (n = 8), lack of job pertinent skills (n = 4), and lay-offs caused by business shortages (n = 4) appear to be the primary reasons for job termination and not seizure activity. In only one case did an individual leave a job due to seizure-related causes, and it appears that dissatification with wages was a concomitant problem for this individual. These findings are consistent with those offered by Rodin, Shapiro, and Lennox (1977) which suggest that it is "epilepsy associated" problems and not the seizure disorders, per se, which are generally impairing life performance.

It is of interest that those who lost jobs due to skill deficits (n = 4) and those who lost jobs due to a lay-off (n = 4) were all again working at follow-up versus only four out of eight in the group having emotional/attitudinal difficulties. The two individuals who lost jobs due to industrial accidents were not working at the time of follow-up and did not appear to have had seizure-related accidents--however, it is difficult to rule out the side effects of medication or other epilepsy-related causality in relation to an injury.

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Insert Table VII here

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Table VIII reviews the data available on negative exits from the program (program dropouts). This group totals 21 clients. Basic data on this group indicates a mean educational level of 13.1 years versus 12.8 years for both the intake population (n = 108) and the employed group (n = 50). The negative exit group however, spent at least five more months unemployed in the last two years (x = 16.6), than the entire populace at intake (x = 10.3) or the group that secured employment (x = 11.7). This negative exit group also has a very high proportion of involvement with inpatient or outpatient mental health treatment (43%) as reported at intake when compared to the employed group or intake populace (17% and 22.2%, respectively).

The follow-up interviewer reported a high degree of transiency among the negative exit group and was only able to contact 10 of 21. Those who were contacted seemed to be less seizure-impaired than the general intake for employed groups. Of this group of 10, none were currently working or had made contact with other rehabilitation agencies.

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Insert Table VIII here

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Summary and Recommendations

In reviewing the data presented, it should be noted that this is an initial and very basic review of findings. This data merits more refined analysis and the addition of information on subsequent clients will further facilitate more sophisticated statistical analysis. Nevertheless, this information is of value in assessing basic client-related trends, providing evaluative data, and suggesting program modification. In summary, the following conclusions are drawn and recommendations offered:

(a) Specialized vocational services, within a comprehensive team con-

text, can be successful in rehabilitating the client with active seizure disorders as assessed by proportion employed (46.3%), mean salary levels ($x > \$8,000.00$ per year), and employment retention (83%). Agencies who are unsophisticated in relation to the disability may encounter difficulties in rehabilitating this populace as evidenced by our intake data,and the follow-up data on state vocational rehabilitation clients with epilepsy in the State of Maryland (Freeman and Gayle, 1977). In Maryland, less than 50% of those "rehabilitated" were still employed and only 25% of the group were earning more than $5,000.00 a year (Freeman and Gayle, 1978, p. 238). It would appear that, in general, state rehabilitation counselors could profit from education in regard to the disability and more effective working relationships with specialists in this area.

(b) Seizures do not appear to be the major barrier to employment maintenance, but the "epilepsy associated" problems (psychosocial difficulties, performance problems, etc.) as previously discussed by Rodin, Shapiro, and Lennox (1977). Therefore, the value of a team approach to assessment (neuropsychologist, social work staff, etc.) is underscored for purposes of vocational evaluation and planning.

(c) Clients tend to rate job lead, follow-up, and vocational counseling services as having above average value versus group activities, e.g., job club, which received only average ratings. Group activities are important to vocational staff for purposes of organizing job search activities and interpersonal assessment of client functioning, but may not be as explicitly meaningful to clients. Epilepsy Center clients tended to value individual ("personalized") versus

group vocational services. In order to improve Epilepsy Center job lead services, a contract was recently negotiated with state Employment Securities in order that new job leads might be reviewed by our staff and clients on a daily basis. A career enhancement social skills program and a "buddy system" of job maintenance have been instituted to meet the "follow-up need" of the employed. Similar job maintenance group activities were recently discussed as a component of the national Training and Placement Services (TAPS) program, developed to alleviate the unemployment problems of young adults with epilepsy (Benson, 1978). In consideration of the impact of "epilepsy associated" problems on job maintenance, follow-up seems imperative.

(d) In order to more actively outreach and effectively work with this disability group, the establishment of satellite vocational units within medical centers and local epilepsy associations is recommended. The Epilepsy Center has recently been awarded a state Division of Vocational Rehabilitation grant to establish liaison placement specialists in local epilepsy associations around the state of Washington.

(e) It appears that individuals with histories of psychological disabilities and longer periods of unemployment may need more comprehensive and intensive services. Epilepsy Center vocational services will work more closely with the social skills unit to assist these individuals, as well as maintaining more active liaison with the local community Mental Health Center's Adult Development Program. These individuals will also require greater and more immediate utilization of work experience and on-the-job training programs.

TABLE I

CLIENT CHARACTERISTICS AT INTAKE (N = 108)

AGE	MEAN = 28.1	S.D. = 8.8
EDUCATION	MEAN = 12.8	S.D. = 1.5
MONTHS UNEMPLOYED IN LAST TWO YEARS	MEAN = 10.3	S.D. = 6.8

SEIZURE STATUS:

$\geq$ 1 SEIZURE PER YEAR	94.4% (102)
SEIZURES ON MONTHLY BASIS	67.5% (73)
LACK OF DRIVER'S LICENSE	82.4% (89)

TABLE II

CLIENT EARNINGS AT INTAKE (N = 108)

NO PERSONAL INCOME	29.6% (32)
FEDERAL/ STATE SUBSIDY (MEAN YEARLY INCOME = $2,922.96)	50.9% (55)
UNDEREMPLOYED (MEAN YEARLY INCOME = $3,153.84)	11.1% (12)
MISSING DATA/OTHER	8.3% (9)
	99.9%

TABLE III

HISTORY OF CONTACT WITH STATE VOCATIONAL REHABILITATION

ONLY 49.1% (53) OF CLIENTS HAD PRIOR CONTACT WITH STATE VOCATIONAL REHABILITATION

OUTCOME FOR THOSE WITH STATE VR CONTACT:

TRAINING/COLLEGE	32.1%	(17)
REFERRED TO EPILEPSY CENTER	17.0%	(9)
REFERRED TO SHELTERED WORK	15.1%	(8)
PLACEMENT	11.3%	(6)
NO OUTCOME	24.5%	(13)
	100.0%	

TABLE IV

Work Relevant Seizure Data (N ≤ 108)

Dependable Warning/Aura

66.6% of those with Partial Seizures Secondarily Generalized (N = 18)

31.0% of those with "Grand Mal" Seizures (N = 23)

33.3% of those with Psychomotor Seizures (N = 24)

10.5% of those with Absence Seizures (N = 19)

Previously Refused Employment Due to Seizures

Yes	43	39.8%
No	54	50.0%
Missing	11	10.2%
	108	100.0%

Seizures Prevented Client Job Search

Yes	48	44.4%
No	53	49.1%
Missing	7	6.5%
	108	100.0%

Seizures While Working on a Previous Job

Yes	73	67.6%
No	27	25.0%
Missing	8	7.4%
	108	100.00%

TABLE V
FOLLOW-UP DATA AT 18 MONTHS

GENERAL OUTCOME:

EMPLOYMENT	46.3%	(50)
SCHOOL	9.3%	(10)
IN PROCESS	20.4%	(22)
NEGATIVE EXITS	20.4%	(22)
MISSING DATA	3.7%	(4)
	100.1%	(108)

BASIC DATA ON THE EMPLOYED:

EMPLOYMENT MAINTENANCE = 83% (34/41 OF THOSE CONTACTED)

EDUCATION

MEAN = 12.8, S.D. = 1.7

MONTHS UNEMPLOYED IN LAST TWO YEARS

MEAN = 11.7, S.D. = 8.2

OTHER DISABILITIES

PSYCH/ALCOHOL	17%
PHYSICAL	14.6%
RETARDATION/NEUROLOGICAL	4.9%

TABLE VI

AN OVERVIEW OF THE EMPLOYED GROUPS

EMPLOYED: REMAINING ON SAME JOB (N = 21)

F.T. EARNINGS (18) MEAN = $8,791.96 S.D. = $2,097.35

P.T. EARNINGS (3) MEAN = $4,102.40 S.D. = $2,371.56

57% (12/21) = SEIZURES ON A MONTHLY BASIS

43% (9/21) = SUBJECT TO GENERALIZED TONIC-CLONIC SEIZURES

LOST ORIGINAL JOB, BUT WORKING (N = 13)

F.T. EARNINGS MEAN = $7,989.66 S.D. = $1,992.48

46% (6/13) = SEIZURES ON A MONTHLY BASIS

62% (8/13) = SUBJECT TO GENERALIZED TONIC-CLONIC SEIZURES

LOST JOB, NOT WORKING (N = 7)

F.T. EARNINGS MEDIAN = $6,000

57% (4/7) = SEIZURES ON A MONTHLY BASIS

29% (2/7) = SUBJECT TO GENERALIZED TONIC-CLONIC SEIZURES

VOCATIONAL SERVICES RECEIVING HIGHEST RATINGS : JOB LEADS, FOLLOW-UP, COUNSELING

TABLE VII

REASONS ESTABLISHED FOR A JOB LOSS

EMOTIONAL/ATTITUDINAL DIFFICULTIES	= 8
LACK OF JOB-RELATED SKILLS	= 4
LAY-OFF	= 4
ACCIDENT ON THE JOB	= 2
LOW PAY/SEIZURES	= 1
UNKNOWN	= 1
	20

TABLE VIII

NEGATIVE PROGRAM EXITS (N = 21)

BASIC DATA ON NEGATIVE EXIT GROUP:

EDUCATION

MEAN = 13.1, S.D. = 1.6

MONTHS UNEMPLOYED IN LAST TWO YEARS

MEAN = 16.6, S.D. = 7.8

OTHER DISABILITIES

- PSYCH = 42.9%
- RETARDATION = 9.5%
- PHYSICAL = 9.5%

FOLLOW-UP AT 18 MONTHS (10/21):

30% (3/10) = SEIZURES ON A MONTHLY BASIS

30% (3/10) = SUBJECT TO GENERALIZED TONIC-CLONIC SEIZURES

TWO HAD BRIEFLY HELD JOBS

(MEAN SALARY = $9,000)

NONE CURRENTLY WORKING

NONE HAD MADE CONTACT WITH OTHER REHABILITATION AGENCIES

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APPENDIX 1

Table 1

Client Characteristics at Vocational Intake

1. Sex:

Male	73	67.6%
Female	34	31.5%
Missing	1	1.0%
	108	100.1%

2. Age:

Mean = 28.1 S.D. = 8.8

3. Education:

Mean = 12.8 S.D. = 1.5

4. Seizure Status:

< 1 Seizure per year

6 5.5%

≥ 1 Seizure per year

102 94.4%

108 99.9%

Seizure on monthly basis:

73 67.5%

Two or more seizure types:

19 18.5%

5. Seizure Typology (≥ 1 seizure yearly):

Generalized Tonic-clonic

38 34.3%

Psychomotor

40 37.0%

Absence 20 18.5%

Partial Seizures-Secondarily Generalized

18 17.0%

Other 9 8.3%

6. Other Disabilities at Intake:

Psychiatric History/Addictions

24 22.2%

Physical Disabilities

21 19.4%

Retardation/Neurological Deficits

10 9.3%

7. Earnings at Intake:

No personal income

32

Federally subsidized

55

(Mean Income = $243.58; S.D. = $120.30)

Underemployed 12

(Mean Income = $262.82; S.D. = $84.28)

Missing Data/Other 6

8. Number of Jobs in Last Two Years (n = 89)

None 26 29.2%

Three or More Jobs

17 19.1%

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One or More Jobs 63 70.7%

9. For Those Employed Within Last Two Years:

Number of months out of work

(Mean = 10.3 months; S.D. = 6.84)

10. Reasons Given for Unemployment Status:

Seizures	35	31.5%
School	12	10.8%
Psychiatric Disability	11	9.9%
Attitudes	7	6.3%
Other	46	41.4%
	111	99.9%

Table 1
Client Characteristics at Vocational Intake
Page Two

11. Possession of Drivers License:

Yes	18	16.7%
No	89	82.4%
Missing	1	1.0%
	108	100.1%

12. Prior Contact With State Vocational Rehabilitation:

Yes	53	49.1%
No	53	49.1%
Missing	2	1.9%
	108	100.1%

13 Outcome for Those With State VR Contact:

Training/College	17	32.1%
No Outcome	13	24.5%
Referred to Epilepsy Center	9	17.0%
Referred to Sheltered Work	8	15.1%
Placement	6	11.3%
	53	100.0%

14. Seizures Prevented Client Job Search:

Yes	48	44.4%
No	53	49.1%
Missing	7	6.5%
	108	100.0%

15 Previously Refused Employment Due to Seizures:

Yes	43	39.8%
No	54	50.0%
Missing	11	10.2%
	108	100.0%

16. Seizures While Working on a Previous Job:

Yes	73	67.6%
No	27	25.0%
Missing	8	7.4%
	108	100.0%

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Frequency of Seizures Occurring on the Job:

Infrequently	26	35.6%
Sometimes	13	17.8%
Frequently	28	38.4%
Missing	6	8.2%
	73	100.0%

17. Presence of Warning Aura:

Yes	52	48.2%
No	44	40.2%
Missing	12	11.1%
	108	99.5%

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Dependability of Warning Aura by Seizure Type:

66.6% of those having Partial Seizures - Secondarily Generalized (Total n = 18)

31.0% of those having Generalized Tonic-clonic (Total n- 23)

33.3% of those having Psychomotor Seizures (Total n = 24)

10.5% of those having Absence Seizures (Total n = 19)

TABLE II

Follow-up Data

1. General Outcome:

Employment	50	46.3%
School	10	9.3
Process	22	20.4
Negative Exits	22	20.4
Missing Data	4	3.7
	108	100.1%

2. Placement Approach:

Unit Intervention	32 =	64.0%
Self-Placement	18 =	36.0
	50	100.0%

3. Placements contacted at 18 month follow-up = 41 (82% of total placements)

   Number employed 34/41 = 83% employment retention

4. Basic Data on the Employed (N = 41):

   Education:
   Mean = 12.8, S.D. = 1.7

   Months unemployed in last 24:
   Mean = 11.7, S.D. = 8.2

   Disabilities:
   Psych/Alcohol = 17%
   Physical = 14.6%
   Retardation/ Neurological = 4.9%

A. Employed: Remaining on Same Job (N = 21):

5. F.T. Earnings:
   (18)
   Mean = $8,791.96
   S.D. = $2,097.35

   P.T. Earnings:
   (3)
   Mean = $4,102.40
   S.D. = $2,371.56

Employed: Remaining on Same Job (Cont.)

6. Seizure status:
   16 = >1 seizure per yr.
   4 = infrequent seizures/aura only
   1 = seizure free
   21

   57% (12/21) = seizures on monthly basis
   42.9% (9/21) = subject to generalized tonic-clonic seizures

7. Work Days Missed:

4/21 missed days due to seizures	Mean = 6.5, S.D. = 6.4
10/21 missed days due to medical appointments	Mean = 2.9, S.D. = 1.6
10/21 missed days due to non-epilepsy related illness	Mean = 3.1, S.D. = 3.0

8. Vocational Services and Ratings:

	N	Mean Rating	S.D.
Job leads	18	4.2	1.2
Follow-up	15	4.0	1.0
Counseling	16	3.6	1.2
Referral	6	3.5	1.0
Testing	3	3.3	1.3
Job Club	13	3.1	1.2
Job S.S.	3	2.9	1.3
Job Station	2	2.0	1.4

Code: 1 = No Value 5 = Exceptional Value

Comments (frequent):

Positive:
4/9 responses lauded "personalization of services"

Improvement:
3/11 responses asked for more and "better" job leads

Follow-up Data

B. Lost a Job, but Working (N = 13):

9. Reasons for job loss:

Lack of skills	= 4
Lay-off	= 4
Emotional/Attitudinal Difficulties	= 4
Low-pay/seizures	= 1
	13

10. Second Placement Approach:

Unit Intervention	6
Self-Placement	7
	13

11. F.T. Earnings:

Mean = $7,989.66
S.D. = $1,992.48

12. Seizure Status:

9 = >1 seizure per yr.
2 = Infrequent seizures
2 = seizure free
13

46% (6/13) = seizures on monthly basis

61.5% (8/13) = subject to generalized tonic-clonic seizures

13. Work Days Missed:

1/13 missed days due to seizures 8

3/13 missed days due to medical appointments Mean = 4 S.D. = 5.2

1/13 missed days due to anti-convulsant problems 5

3/13 missed days due to non-epilepsy related illness Mean = 5.3 S.D. = 4.2

Lost a Job, but Working (Cont.)

14. Vocational Services and Ratings:

	N	Mean Rating	S.D.
Job Station	1	5.0	-
Counseling	12	4.0	1.1
Follow-up	6	3.8	.75
Job Leads	13	3.5	1.3
Referral	4	3.5	1.7
Testing	10	3.3	1.1
Job S.S.	7	3.1	1.2
Job Club	8	3.1	1.2
Sheltered Work	1	1.0	-

Code: 1 = No Value 5 = Exceptional Value

Comments (frequent):

Positive:
4/13 responses were supportive of "personalization of services"

Improvement:
3/13 responses referenced more or better quality job leads

B. Lost Job, Not Working (N = 7):

15. Reasons for Job Loss:

Accident on job	= 2
Emotional/Attitudinal Difficulties	= 4
Unknown	= 1

16. F.T. Earnings:

Mean = $7,119.60
S.D. = $3,220.30

17. Seizure Status:

6 = >1 seizure per year
1 = seizure free
7

57% (4/7) = seizures on a monthly basis

29% (2/7) = subject to generalized tonic-clonic seizures

Lost Job, Not Working (Cont.)

18. Work Days Missed:

2/7 missed days due to seizures — Mean = 3, S.D. = 2.8

19. Vocational Services and Ratings:

	N	Mean Rating	S.D.
Follow-up	1	5.0	-
Job Leads	4	4.0	.81
Job Station	2	4.0	1.4
Counseling	6	3.8	1.3
Testing	4	3.5	1.3
Referral	1	3.0	-
Job S.S.	1	3.0	-
Job Club	3	2.6	1.2

Comments (frequent):

Positive:

2/13 reference to personalized approach

Improvements:

None suggested

Note: None of these individuals had contacted another rehabilitation agency

D. Negative Exits (N = 10):

None currently working
High transiency - 45.4% phone follow-up
Only two had held jobs (mean salary = $9,000)
None had made contact with other rehabilitation agencies

20. General Data (N = 21):

Education:
Mean = 13.1, S.D. = 1.6

Months unemployed in last 24:
Mean = 16.6, S.D. = 7.8

Other Disabilities:
Psych = 42.9%, Retardation = 9.5%, Physical = 9.5%

21. Seizure Status:

6 = ≥1 seizure per year
2 = unknown frequency
2 = seizure free
10

30% (3/10) = seizures on a monthly basis

30% (3/10) = subject to generalized tonic-clonic seizures

22. Vocational Services and Ratings

	N	Mean Rating	S.D.
Referral	2	5.0	-
Job S.S.	4	4.3	.57
Job Station	4	3.6	1.5
Testing	2	3.5	.7
Counseling	8	3.1	1.5
Job Club	3	3.0	-
Job Leads	1	2.0	-